

AUI-C2C Only DER_0 baseline proposal for Type 1 and Type 2 PHYs

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v1p0

Contributors & Supporters

Supporters

- Femi Akinwale, Intel
- Ali Ghiasi, Ghiasi Quantum
- Mike Dudek, Marvell
- Tobey P.-R. Li, MediaTek
- Adam Healey, Broadcom

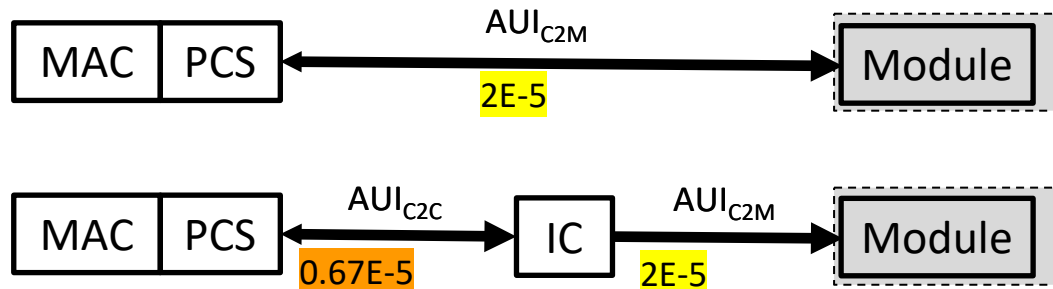
Introduction

- This contribution will focus on the allocation of BER for AUIs inside a Type 1 or Type 2 PHY (not part of an extender sublayer)
 - AUIs are optional instantiations
- Note: “BER” is loosely used in this contribution to represent “random BER” and recognize there is much discussion on the topic

Recap of AUI Adopted DER_0 values

When two AUIs are on a host, the adopted DER_0 allocation is C2C = 0.67E-5 and C2M = 2E-5

When only one AUI C2M is on a host, the adopted DER_0 allocation is C2M = 2E-5



Motion #1

Move to adopt C2C DER_0 = 0.67E-5 and C2M DER_0 = 2E-5 for the case when the AUI DER_0 is split across the C2M and the C2C inside of a Type 1 or Type 2 PHY per lusted_3dj_01a_230921, slide 7

M: Matt Brown
S: Tobey P.-R. Li
Technical (>=75%)
802.3 voters only
Result: passed by unanimous consent 10:49 a.m.
Task Force: 3dj

https://www.ieee802.org/3/dj/public/23_0921/motions_3dj_230921.pdf

Motion #2 - one AUI C2M, Kent

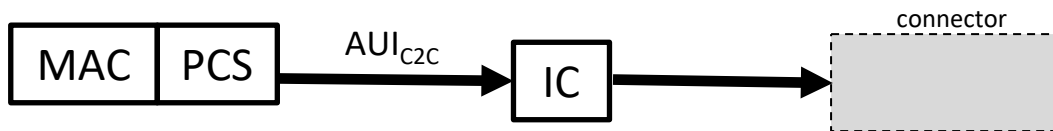
Move to adopt C2M DER_0 = 2E-5 for the case when the AUI is only a C2M (no C2C) inside of a Type 1 or Type 2 PHY per choice A in lusted_3dj_01a_230921, slide 9

M: Matt Brown
S: Ali Ghiasi
Technical (>=75%)
802.3 voters only
Result: Y: 46, n: 4, A: 9. passed 11:21 a.m.
Task Force: 3dj

https://www.ieee802.org/3/dj/public/23_0921/motions_3dj_230921.pdf

Not Adopted Yet - AUI C2C Only

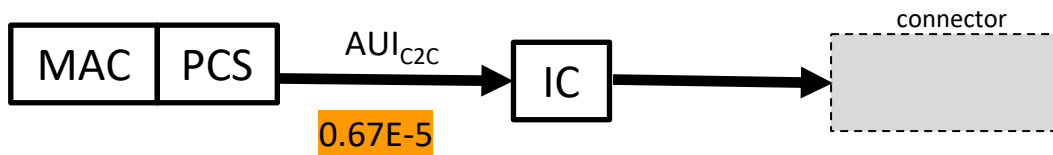
- The TF has not yet formally adopted the DER_0 value for the case when the AUI is only a C2C (no C2M) inside of a Type 1 or Type 2 PHY
 - Zero presentations on the topic since Sept 2023



Example use case: Host IC “Retimer” to passive copper cable

Proposal

Set C2C DER_0 = 0.67E-5 for the case when the AUI is only a C2C (no C2M) inside of a Type 1 or Type 2 PHY



Summary

- Most of the AUI DER₀ values are already adopted
- The TF has not yet formally adopted the DER₀ value for the case when the AUI is only a C2C (no C2M) inside of a Type 1 or Type 2 PHY
 - The proposed DER₀ value for AUI C2C was assumed in the analysis that justified the adopted DER₀ value for KR/CR PMDs (see https://www.ieee802.org/3/dj/public/23_11/healey_3dj_01a_2311.pdf)
 - Increasing DER₀ above 0.67e-5 for the C2C will be impacting the allowed DER₀ for CR
- Let's see if we can make a DER₀ decision on the "C2C only" case to complete a gap in the specification

Straw polls and possible motions on these topics were requested

Thanks!